

SPACE WEATHER IN PORTUGAL

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INTRODUCTION: In Portugal, there is not a strong community dedicated to space weather although individuals and small research groups study this research field. So, it is not surprising the lack of services to provide space weather alerts and forecasts to support economic and societal activities.

In recent years there has been increasing interest in this area, which has led to the emergence of new projects and activities. Also, Academia and private companies are working together to develop projects in this research field. This presentation shows some of these interesting examples.

ACTIVITIES: Creation of an infrastructure dedicated to Space weather studies, the **SPINLab** : Space - Planetary Interactions Monitoring and Forecasting Laboratory (public presentation scheduled for September 2017).



RESEARCH PROJECTS:

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1. SOLAR RISK SERVICE FOR CRITICAL GNSS APPLICATIONS
Space Weather
Aviation • Air Navigation • Oil & Gas
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2. SWAIR - SPACE WEATHER IMPACT ON GNSS SERVICE FOR AIR NAVIGATION
Application for a Small ARTES 20 project
3. Evolution of Solar Activity over a Solar Cycle - from Statistics to Physics (Slovakia and Portugal)
4. COSIS: Coimbra Observatory Solar Information System
5. SEIS: Space Environment Information System (ESA)

PhD THESIS (on going):

Subject: Geomagnetic storm sudden commencement

Subject: Comparative analysis of SWARM and ground based observations pointed on South Atlantic anomaly

Subject: Mathematical models to predict solar activity

Subject: GNSS, Space Weather and Air Navigation

INSTITUTIONS:

1. UNINOVA: www.ca3-uninova.org



2. CITEUC: <http://geofisico.dyndns.org/>



PRIVATE COMPANIES:

Present Technologies: main business areas are Mobile Solutions, IPTV Applications and Web & Enterprise Applications



Bluecover: specialised in geolocation services that provides solutions to aerospace, sports and surveillance businesses

PRESENT & FUTURE: We are now performing a survey to identify the existing projects, infrastructures, institutions, and groups devoted to space weather. Our aim is to create a strong Portuguese community, to promote dissemination activities focused on different targets (researchers, industry, media, policy makers, and public), to organize user workshops and the creation of a web portal (among others activities).

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